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EXAMINER	
GOOD JOHNSON, MOTILEWA	
ART UNIT	PAPER NUMBER
2628	
MAIL DATE	DELIVERY MODE
07/21/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/371,972	IOURCHA ET AL.	
	Examiner	Art Unit	
	M GOOD JOHNSON	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-12,14-18,23-26,28 and 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 9-12, 14-18, 23-26, 28-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-7, 9-12, 15-18, 23-26 and 28-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Yasui et al., U.S. Patent Number 6,271,848 B1.

Regarding claim 1, Yasui discloses a method of rendering a graphic primitive in a graphics system, the graphic primitive having a plurality of sides that define the edge of the primitive, the method comprising: receiving, in the graphics system, a signal from an interface, the signal comprising data about a plurality of vertices of the primitive and a variable at a point being processed (figure 1, col. 4, lines 37-54); selecting, in the

graphics system, an interior point within the graphic primitive (figure 6, interior point c); selecting, in the graphics system, at least two side points located on a side of the graphic primitive (figure 6 selecting two side point a and b); determining, in the graphics system, for each of the at least two side points, a first ratio according to a first channel value for each respective one of the at least two side points and at least two of the vertices (col. 7, lines 37-38, determining division ratio, t1); determining, in the graphics system, one or more remaining channel values for each of the at least two side points based on the respective first ratio (col. 7, lines 57-65, deriving texture coordinate values, normal vectors and alpha values using the ratio, t1); determining, in the graphics system, a second ratio according to a first channel value for the interior point and the first channel values of the at least two side points (col. 7, lines 60-41, determining division ratio, t2); determining, in the graphics system, one or more remaining channel values for the interior point according to the second ratio and the corresponding channel values of the at least two side points (col. 7, lines 57-65, deriving texture coordinate values, normal vectors and alpha values using the ratio, t2); and storing, in the graphics system, one or more of the additional channel values for the interior point (col. 7, line 66 – col. 8, line 15).

Regarding claim 2, Yasui discloses determining, in the graphics system, one or more remaining channel values for each of the at least two side points further comprises performing, in the graphics system, linear interpolation using an interpolation engine to determine the interpolated channel values of the two side points (col. 7, lines 33-65).

Regarding claim 3, Yasui discloses wherein determining, in the graphics system, one or more remaining channel values for each of the at least two side points further comprises performing, in the graphics system, perspective interpolation using an interpolation engine to determine the interpolated channel values of the two side points (col. 7, lines 17-32).

Regarding claim 4, Yasui discloses further comprising repeating in the graphics system, each of the aforementioned steps for a plurality of points in the graphic primitive.

Regarding claim 5, Yasui discloses the channel value represents color (col. 7, lines 28-31).

Regarding claim 6, Yasui discloses the channel value represents luminance (col. 7, line 59 – col. 8, line 15).

Regarding claim 7, Yasui discloses the channel value represents a texture coordinate (col. 7, lines 59-60).

Regarding claim 9, it is rejected based upon similar rational as above claim 1. Yasui further discloses calculating a third ratio, t3, col. 7, lines 41-43.

Regarding claim 10, Yasui discloses the step of determining in the graphics system, the first ratio for the first point comprises determining, in the graphics system, the channel values of end points of the first edge (col. 7, lines 38-39).

Regarding claim 11, Yasui discloses the step of determining in the graphics system, the second ratio of the second point comprises determining in the graphics system, the channel values of end points of the second edge (col. 7, lines 40-41).

Regarding claim 12, Yasui discloses determining, in the graphics system, one or more additional channel values includes using, in the graphics system, depth values of the first point and second point to determine a channel value for the interior point (col. 7, lines 33-46).

Regarding claim 15, it is rejected based upon similar rational as above claim 1. Yasui further discloses a channel value input device (CPU 10) configured to determine a channel value for each of a plurality of vertices of the graphic primitive using data received from an interface; a point specifier (attribute classifying section, which Examiner interprets as point specifier), coupled to the channel value input device, (it is noted that while the attribute classifying section is not directly coupled, it is inherently coupled in that the channel value data that is passed to the geometry converting section would be the same channel value if no geometry converting is necessary and therefore

passed directly to the attribute section) configured to select an interior point within the graphic primitive; and an interpolation engine (rendering section 20).

Regarding claim 16, Yasui discloses the channel value of the interior point is further dependent upon a distance E between the interior point and the first point, and dependent upon a distance F between the interior point and the second point (figure 6).

Regarding claim 17, Yasui discloses the channel value of the first point is further dependent upon a distance A between the first point and the first end point of the first edge, and dependent upon a distance B between the first point and the second end point of the first edge (figure 6).

Regarding claim 18, Yasui discloses the channel value of the second point is further dependent upon a distance C between the second point and the first end point of the second edge, and dependent upon a distance D between the second point and the second end point of the second edge (figure 6).

Regarding claims 23-26, they are rejected based upon similar rational as above. Yasui further discloses the CPU supplying the vertex data including the coordinate data for each vertex and depth values, col. 5, lines 55-67, calculating ratio values, col. 7 and converting to display screen coordinates, col. 6, lines 21-30.

Regarding claim 28, Yasui discloses determining, in the graphics system, one or more remaining channel values for the interior point further comprises performing, in the graphics system, linear interpolation using an interpolation engine to determine the channel value of the selected interior point within the graphics primitive (col. 7, lines 33-65).

Regarding claim 29, Yasui discloses determining, in the graphics system, one or more remaining channel values for the interior point further comprises performing, in the graphics system, perspective interpolation using an interpolation engine to determine the channel value of the selected interior point (col. 7, lines17-32).

3. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Nally et al., U.S. Patent Number 5,598,525.

Regarding claim 14, Nally discloses a system for rendering a graphic primitive, the graphic primitive including a plurality of vertices and edges, the system comprising: a plurality of agents configured to receive information from an interface (206) related to the plurality of vertices, a point within the graphic primitive, and generate output signals; an arbiter (202 and 201) coupled to the plurality of agents and configured to receive the output signals and to generate request signals; and an interpolation engine (204) configured to receive the request signals and generate an output ratio signal dependent on at least some of the output signals from the plurality of agents; and a router (205,

controller) coupled to the interpolation engine and configured to transmit the output ratio signal to an input of at least one of the plurality of agents.

Response to Arguments

4. Applicant's arguments filed 04/29/09 have been fully considered but they are not persuasive.

Applicant argues that Yasui et al, (US 6,271,848, hereinafter Yasui) fails to disclose "determining ... for each of the at least two side points, a first ratio according to a first channel value for each respective one of the at least two side points and at least two of the vertices" as recited in claim 1. Yasui discloses in figure 6, determining for two side points, i.e. (Sx, Sy at vertex 00 and Sx, Sy at vertex 01), a first ratio, t1 according to a first channel value, for each one of the at least two side point and at least two vertices (col. 7, lines 36-46).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., calculating a ratio for each individual point) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant claims recites "determining for each of the at least two side points, a first ratio". It is well known in the art that a ratio is a portion or quantity relative to another, and therefore the Examiner interprets the determined ratio

as a the ratio of the two side points. Applicant agrees that Yasui discloses determining data according to a first channel value. Yasui further discloses the Z value is derived from linear interpolation. It is well known in the art that linear interpolation is the difference of two values to calculate an unknown value at a selected point. Additionally, Applicants argues that Yasui fails to disclose, teach, or suggest determining the channel values "according to ... the corresponding channel values of the at least two side points." See response above.

Applicant argues that Yasui fails to disclose, teach, or suggest "calculating ... a ratio value dependent on the independent variable at the point X, vertex values Xo, X1, and depth values Zo, ZI" as recited in claim 23. Yasui discloses in figure 5 and 6 a rendering section and further discloses an edge interpolator, Zvalue, t and raster interpolator, and a texture generator, therefore Yasui discloses calculating a ratio, dependent on depth values and vertex values. Yasui further discloses internal division ratios t1, t2, and t3 are determined by edge interpolation.

5. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M GOOD JOHNSON whose telephone number is (571)272-7658. The examiner can normally be reached on Monday-Friday 8-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Motilewa Good-Johnson/
Primary Examiner, Art Unit 2628

mgj